

Appl. No. 10/090,896
Reply to Office Action of December 16, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

CLAIMS

The invention is claimed as follows:

- Claim 1 (currently amended): A fuse block comprising:
- a body;
 - a plurality of terminals fixed to and exposed on at least one side of the body;
 - a fuse element visible to a person viewing the body and the terminals, the fuse element contacting at least two of the plurality of terminals; and
 - wherein at least three pairs of the terminals are arranged in the body to enable a single terminal bus to supply one of the terminals of each of the pairs.
- Claim 2 (original) The fuse block of Claim 1, wherein the body includes a plastic piece.
- Claim 3 (original) The fuse block of Claim 1, wherein the fuse element includes a resistance wire, a punched element or spiral winding.
- Claim 4 (original) The fuse block of Claim 1, wherein the fuse element is surface mounted.
- Claim 5 (original) The fuse block of Claim 4, wherein the surface mounted fuse element includes multiple strands.
- Claim 6 (original) The fuse block of Claim 4, wherein the surface mounted fuse element is provided on a substrate that provides means for electrically connecting the fuse element to the terminals.

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Claim 7 (canceled without prejudice or disclaimer)

Claim 8 (previously presented) The fuse block of Claim 1, wherein the terminal pairs are arranged in a row.

Claim 9 (previously presented) The fuse block of Claim 1, which includes a plurality of fuse elements that each connect the terminals of one of the pairs.

Claim 10 (original) The fuse block of Claim 9, wherein at least two of the plurality of fuse elements have different ratings.

Claim 11 (previously presented) The fuse block of Claim 1, wherein the terminals of the terminal bus are formed integrally with one another.

Claim 12 (previously presented) The fuse block of Claim 1, wherein the terminals of the terminal bus are formed on a strip.

Claim 13 (currently amended) The fuse block of Claim 7 1, wherein the terminals supplied by the bus are electrically connected to a power supply line.

Claim 14 (currently amended) A fuse block comprising:
a plurality of rows of pairs of terminals, wherein the terminals of at least two pairs of each row are electrically connected by a fuse element, the fuse elements visible to a person viewing the rows of terminals.

Claim 15 (previously presented) The fuse block of Claim 14, wherein at least two terminals from at least one of the rows are commonly bussed.

Claim 16 (previously presented) The fuse block of Claim 14, wherein a common bus supplies one of the terminals of each of the pairs of at least one of the rows.

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Claim 17 (previously presented) The fuse block of Claim 16, wherein the common bus includes an integrally formed strip of terminals.

Claim 18 (previously presented) The fuse block of Claim 14, wherein at least two adjacent pairs of terminals within the same row of terminal pairs have different fuse amperage ratings.

Claim 19 (previously presented) The fuse block of Claim 14, wherein at least two adjacent pairs of terminals in different rows of terminal pairs have different fuse amperage ratings.

Claim 20 (currently amended) A fuse block comprising:

a body; and

first, second and third sets of terminals positioned in the body, wherein one of the terminals from the first set is electrically connected to one of the terminals of the second and third sets by at least ~~one fuse element~~ two fuse elements.

Claim 21 (original) The fuse block of Claim 20, wherein the first, second and third sets of terminals are arranged in separate rows.

Claim 22 (original) The fuse block of Claim 20, wherein the first and third rows are outer rows and are staggered.

Claim 23 (original) The fuse block of Claim 20, which includes a plurality of fuse elements that individually contact at least two terminals from the first, second and third sets of terminals.

Claim 24 (original) The fuse block of Claim 20, wherein at least two terminals from one of the first, second and third sets of terminals are electrically connected.

Claim 25 (original) The fuse block of Claim 20, wherein at least two terminals from one of the first, second and third sets of terminals are provided on a strip.

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Claim 26 (original) The fuse block of Claim 20, wherein each of the terminals in one of the sets of terminals is electrically connected to a power supply line.

Claim 27 (original) The fuse block of Claim 20, wherein the second set of terminals is positioned between the other two sets, and wherein the terminals of the second set are electrically connected to a power supply line.

Claim 28 (canceled without prejudice or disclaimer)

Claim 29 (canceled without prejudice or disclaimer)

Claim 30 (previously presented) A junction box having a fuse block comprising:
a body; and
a plurality of terminals fixed to and extending from at least one side of the body, at least one of the terminals having a first integral portion that contacts a fuse element, a second integral portion that receives a terminal of a replacement fuse, a third integral portion connected to a first adjacent terminal and a fourth integral portion connected to a second adjacent terminal.

Claim 31 (original) The junction box of Claim 30, wherein the fuse block includes a plurality of connecting pieces.

Claim 32 (original) The junction box of Claim 30, which includes a module holding one end of a plurality of wires, the module configured to mate with the fuse block and make electrical contact between the plurality of wires and the plurality of terminals.

Claim 33 (original) The junction box of Claim 30, wherein the first and second portions extend from one side of the body and a third portion of the terminals extends from an opposing side of the body.

Claim 34 (previously presented) The junction box of Claim 30, wherein the terminal, the first adjacent terminal and the second adjacent terminal are formed integrally.

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Claim 35 (original) The junction box of Claim 30, which includes a protective member that mounts between the first and second portions of the terminals.

Claim 36 (original) The junction box of Claim 30, which includes a protective member that covers at least one fuse element and enables a person to safely mount replacement fuses to the second portions of the terminals.

Claim 37 (original) The junction box of Claim 30, which includes a protective member that defines a plurality of apertures, the apertures positioned and arranged to fit around the plurality of terminals.

Claim 38 (original) The junction box of Claim 30, wherein the protective member defines a plurality of apertures positioned and arranged to receive a plurality of mounts that project from the body.

Claim 39 (original) The junction box of Claim 30, which includes a protective cover that fits over the plurality of terminals and mates with the body.

Claim 40 (original) The junction box of Claim 30, wherein the plurality of terminals are molded into the body.

Claim 41 (previously presented) The junction box of Claim 30, wherein the terminal, the first adjacent terminal and the second adjacent terminal are provided on a strip that is molded into the body.

Claim 42 (original) The junction box of Claim 30, wherein the second portion defines a groove that receives a male terminal of the replacement fuse.

Claim 43 (original) The junction box of Claim 30, wherein the second portion includes a projection that receives a female terminal of the replacement fuse.

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Claim 44 (original) The junction box of Claim 30, wherein the first portion defines a groove that electrically contacts the fuse element.

Claim 45 (original) The junction box of Claim 30, wherein the first portion electrically contacts a surface mounted fuse element.

Claim 46 (previously presented) A terminal for a fuse block including:
a first portion that extends from the fuse block and contacts a fuse element;
a second portion that extends from the fuse block and receives a terminal of a replacement fuse;
a third portion connected integrally to a first adjacent terminal; and
a fourth portion connected integrally to a second adjacent terminal.

Claim 47 (original) The terminal of Claim 46, which includes a plurality of projections, wherein the first portion includes a first groove defined by the projections and the second portion includes a second groove defined by the projections.

Claim 48 (original) The terminal of Claim 46, which includes a plurality of projections, wherein the first portion electrically contacts a surface mounted fuse element and the second portion includes a groove defined by the projections.

Claim 49 (original) The terminal of Claim 46, which includes a plurality of projections, wherein the first portion includes a groove defined by the projections and the second portion includes one of the projections.

Claim 50 (original) The terminal of Claim 46, wherein the first portion electrically contacts a surface mounted fuse element and the second portion includes a projection.

Claim 51 (original) The terminal of Claim 46, wherein the second portion extends further from the side of the fuse block than does the first portion.

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Claim 52 (original) The terminal of Claim 46, which defines an aperture that helps the terminal to be securely molded into the fuse block.

Claim 53 (previously presented) The terminal of Claim 46, which includes a fifth portion that extends from the fuse block and contacts an electrical lead.

Claim 54 (original) The terminal of Claim 46, wherein the first and second portions extend from the same side of the fuse block.

Claim 55 (previously presented) The terminal of Claim 46, wherein the portions are formed in a strip with the first and second adjacent terminals.

Claim 56 (previously presented) The terminal of Claim 55, wherein at least one of the third and fourth portions defines an aperture that helps the terminal to be securely molded into the fuse block.

Claim 57 (previously presented) A method of providing fuse protection comprising:
providing a body, a plurality of terminals fixed to and exposed on at least one side of the body, wherein at least three of the terminals are formed integrally;
causing a fuse element to contact at least two non-integral terminals; and
providing a location on the plurality of terminals for receiving a terminal of a replacement fuse when the fuse element opens.

Claim 58 (original) The method of Claim 57, which includes providing a first set of terminals and a second set of terminals, wherein the fuse element contacts a first terminal from the first set and a second terminal from the second set, the sets positioned and arranged so that the first and second terminals can receive the replacement fuse.

Claim 59 (original) The method of Claim 58, which includes providing a plurality of fuse elements that individually contact a terminal from the first set and a terminal from the second set.

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Claim 60 (original) The method of Claim 58, which includes positioning and arranging the first and second sets of terminals so that a plurality of replacement fuses can be received by a unique terminal from each set.

Claim 61 (previously presented) The method of Claim 58, which includes forming the integral terminals from a strip of such terminals.

Claim 62 (original) The method of Claim 58, which includes providing a third set of terminals and another fuse element that contacts the first terminal from the first set and a third terminal from the third set, the first and third sets positioned and arranged so that the first and third terminals can receive another replacement fuse.

Claim 63 (original) A method for providing fuse connections in an automobile comprising:
locating a plurality of junction boxes having fuse-linked terminals proximate to localized loads within the automobile;
electrically connecting the fuse-linked terminals to the localized loads; and
bringing power to the fuse-linked terminals.

Claim 64 (original) The method of Claim 63, wherein the plurality of junction boxes have differently rated fuse links.